4K Digital Cinema Projectors

SRX-R220/SRX-R210

Media Block

LMT-100

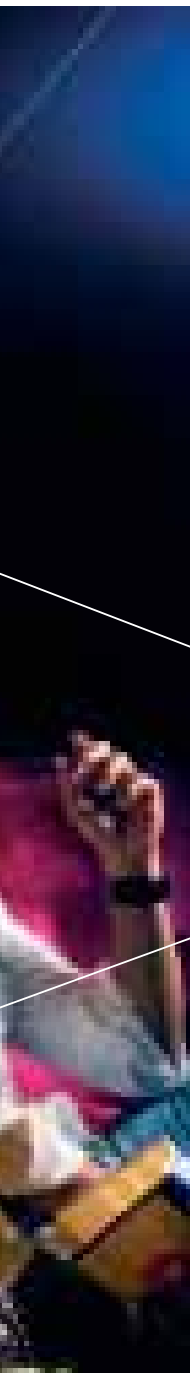
Screen Management System

LSM-100

SONY

The Combination of 4K Visuals With a 2000:1 Self-contained Enclosure Provides a Desirable

Contrast Ratio and a Highly Secure, Solution for the Digital Cinema Age.



SRX-R220

SRX-R210

SONY IS PROUD TO INTRODUCE AN ULTRA-HIGH RESOLUTION PROJECTION SYSTEM DESIGNED SPECIFICALLY FOR DIGITAL CINEMA APPLICATIONS.

The latest range of Sony Digital Cinema Projection systems are specifically developed to comply with the highest standards of the Digital Cinema Initiatives, LLC (DCI) specifications for image quality and security.

The projection systems consist of the SRX-R220/SRX-R210 Digital Cinema Projector, the LMT-100 Media Block and the LSM-100 Screen Management System combined with selected third party peripheral equipment including RAID storage, SMS server and Uninterruptible Power Supply.

The core component of this system, the SRX-R220 and SRX-R210 projectors, are equipped with three Silicon X-tal Reflective Display (SXRD™) imaging devices. These deliver a contrast ratio of 2000:1 at an amazing resolution of (4096 x 2160) pixels (H x V) delivering more than four times the resolution of full HDTV (1920 x 1080) 16:9 widescreen format. The SXRD devices also provide an SMPTE-standard brightness level of 14 ft-L* on a 20-metre wide screen for the SRX-R220 and screens up to 17-metres wide for the SRX-R210.

One of the major characteristics of these projection systems is their all-in-one Security Enclosure design, which accommodates the projector head as well as all of the projection system components including the Media Block, RAID storage and power management system within the Cavity area below. This self-contained design realises a high security level that meets the SPB-2 anti-tamper regulation stipulated by the Digital Cinema Initiatives, LLC (DCI).

A wide range of optional lenses are available for the SRX-R220/SRX-R210 projector, enabling it to be used in a broad range of theatres with many different throw distances.

The LMT-100 Media Block operates in conjunction with RAID storage to provide a 4K server capable of replaying DCI compliant Digital Cinema Package (DCP) files created in both 4K and 2K resolutions. Movie files created at 2K resolution are automatically up-converted to (4096 x 2160) pixels by the projector.

Subtitle insertion is performed within the Media Block at 4K resolution for enhanced quality regardless of whether the original movie file is 4K or 2K.

The Projectionist's Terminal colour touch-screen on the projector provides convenient control of Show Play Lists and system functions. The LSM-100 Screen Management System software, which operates on a separate PC**, provides a sophisticated level of content management including show scheduling, content ingest, operator and set-up functionality and control of standard theatre automation systems. Moreover, this software provides sophisticated security management of the system enclosure, security key management and logging of any security events.

* Measured at screen centre of a full pixel size (4096 x 2160) projection with X=3794, Y=3960 and Z=3890 white and screen gain 1.8.

** Not supplied

CineAlta 4K™
Experience the difference with true 4K Digital Cinema

In 1999, Sony introduced a totally new concept for movie-makers to produce movies in a high definition (HD) progressive video format at 24 frames per second using digital video tape media.

This concept, together with the Sony products that enabled it, was named CineAlta™ – and it has been embraced by an ever broadening spectrum of producers, directors and cinematographers all over the world.

The recent acceleration of HD has heightened the need for best technologies at every point in the professional production workflow. As a result, Sony launched "CineAlta 4K" in 2006 – an extension of the CineAlta brand that currently comprises the SRX Series SXRD 4K projectors. Sony is also working to expand the "4K" concept to other Sony professional equipment, with a longer term plan to establish a 4K production workflow. With Sony CineAlta 4K technologies and equipment, true 4K digital cinema is a reality.

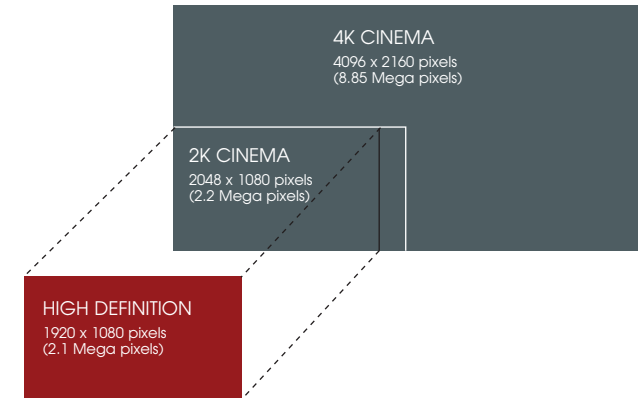
4K Resolution

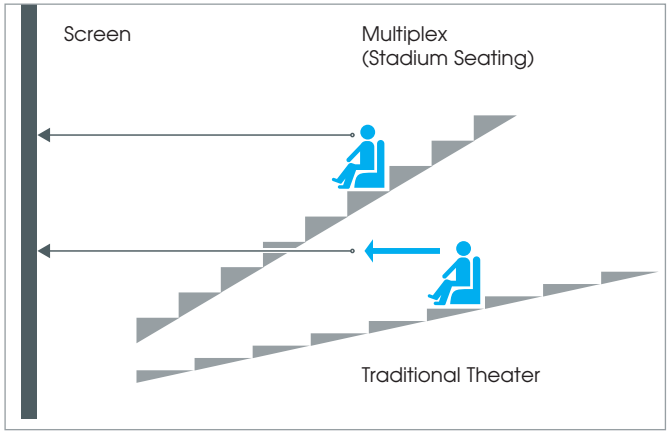
Historically, the movie theatre experience has always exceeded that achieved by home entertainment systems. However, the growth of HDTV at (1920 x 1080) pixels and technical improvements in home theatre equipment have stimulated the movie industry to think further ahead into the future. The Hollywood movie studios have jointly agreed on 4K (4096 x 2160) pixels and 2K (2048 x 1080) pixels as the standards for digital movie distribution and projection.

With new HD home entertainment systems already delivering outstanding picture quality and detail equivalent to 2K cinema, Sony has become the first cinema supplier to introduce systems conforming to the higher 4K standard and deliver resolutions four times greater to provide the optimum experience for theatrical exhibition.

Digital movies in 4K are already being created by scanning the original 35mm film at 4K resolution and Hollywood studios have already released a number of blockbusters in 4K as well as adopting 4K for film restoration projects. Creating movies in 4K protects the future value of the content and also provides a significant benefit to the theatre audience.

Comparison of Image Resolution

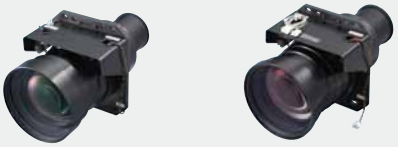




In recent years, stadium type seating is becoming increasingly popular among modern cinema complexes. By sitting closer to the screen, the audience can enjoy an immersive visual experience. However, those sitting in the front rows may witness pixel artefacts when using lower resolution projection systems but the ultra-high resolution CineAlta 4K projection systems deliver images free from pixel artifacts.

Xenon Lamp

LKRL-Z114C LKRL-Z116C LKRL-Z117



LKRL-Z119 LKRL-Z122

High-quality lenses

High 2000:1 Contrast Ratio

The SRX-R220 and the SRX-R210 offer a high contrast ratio of more than 2000:1* through the use of Sony's unique SXRD device. The SXRD imaging device itself achieves a contrast ratio of over 4000:1.

This stunning picture quality makes the SRX-R220 and SRX-R210 ideal for cinema exhibition.

The high contrast ratio has been achieved through two key technologies - the 'Vertically Aligned Liquid Crystal' system and an extremely thin liquid crystal cell gap.

* The contrast ratio is measured from a screen offering a gain of 1.0.

Xenon Lamp Provides Highly Bright and Pure Light Source

The SRX-R220 provides a high brightness of 14 ft-L* on a 20-metre wide screen and the SRX-R210 provides the same brightness on screens up to 17 metres wide using a single Xenon lamp.

A Xenon lamp, standard technology in all film projectors, provides pure, superb colour tonal reproduction essential to meeting the stringent requirements of digital cinema. The SRX-R220 utilises a 4.2 kW Xenon lamp and the SRX-R210 uses a 3.0 kW or 2.0 kW Xenon lamp. These lamps satisfy the wide colour range required for digital cinema by dispersion at a very flat and wide light spectrum.

* Measured at the screen center of a full pixel size (4096 x 2160) projection with 100 IRE white and a screen gain of 1.8.

Variety of High-quality Lenses

A comprehensive range of optional zoom lenses is available for the SRX-R220 and SRX-R210. All lenses utilise very large image circles that contribute to minimising the optical vignetting that typically occurs on projector lenses and to obtaining the highest possible values of MTF (Modulation Transfer Function). With these features, the optical systems of the SRX-R220 and SRX-R210 have the capacity to reproduce resolutions higher than 4K, which is necessary to project 4K contents exactly at 4K-resolution. In addition, these lenses are designed to minimise chromatic aberrations using Sony's advanced optical technology.

Versatile Interfaces

The SRX-R220 and SRX-R210 support a wide variety of signal formats including the 12-bit X'Y'Z' signal that is stipulated in the DCI specification. 10-bit 4:4:4 RGB and 10-bit 4:2:2 YPbPr signal formats are also supported for playback of other alternative contents.

- **Two SRLV connectors are used for connection to the LMT-100 Image Media Block (for DCP playback).**
- **A dual-link HD/DC-SDI input that accepts any of the following signals: SMPTE 372M dual-link HD-SDI (4:4:4), SMPTE 292M HD-SDI (4:2:2), dual-link DC-SDI (RGB 4:4:4), DC-SDI (YPbPr 4:2:2), or 12-bit (X'Y'Z' 4:4:4) signals (for 2K projection or HD projection).**
- **A DVI interface that accepts DVI-P signals for up to 2048 x 1080 at 60 Hz.**

	Resolution	Remarks
1	1024 x 768 at 60 Hz (XGA)	VESA
2	1280 x 960 at 60 Hz (SXGA1)	VESA
3	1280 x 1024 at 60 Hz (SXGA2)	VESA
4	1400 x 1050 at 60 Hz (SXGA+)	VESA
5	1600 x 1200 at 60 Hz (UXGA)	VESA
6	2048 x 1080 at 60 Hz (DC)	
7	1920 x 1080 at 24 Hz (HD)	
8	2048 x 1080 at 24 Hz (DC)	
9	1920 x 1200 at 59.95 Hz Reduced Blanking (WUXGA)	VESA
10	1920 x 1080 at 60 Hz (HD)	EIA/CEA-861B
11	2048 x 1080 at 48 Hz (DC)	

Operational Features

Colour Space Conversion (CSC) function

The SRX-R220 and SRX-R210 feature a Colour Space Conversion (CSC) function, which helps users easily adjust the projector's colour space to that which is defined in the DCDM (Minimum D-Cinema Colour Gamut) or ITU-R BT.709.

The target colour gamut parameters required to meet the DCDM or ITU-R BT. 709 standards can be automatically calculated from settings on the supplied SRX Controller software and then applied to the projector. The internal test generator simplifies adjustment and lets the operator align the projector in minutes.

12-bit LCD Driver

The SRX-R220 and the SRX-R210 utilise a 12-bit imager driver for reproducing extremely natural images.

Gamma Curve Selection

The SRX-R220 and the SRX-R210 provide three preset gamma curve values. Users can select an optimum value from 1.8, 2.2 and 2.6 according to the desired colour tone. A 2.6 gamma setting is automatically selected for feature exhibition.

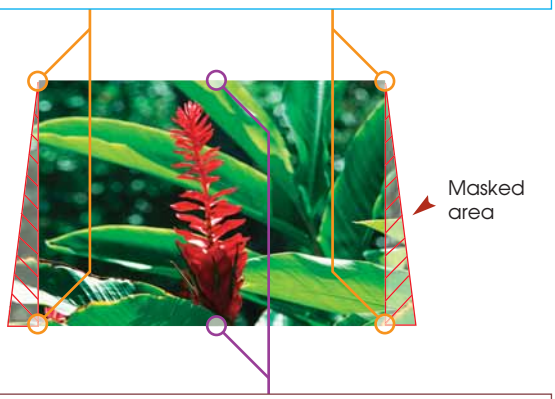
Squeeze Mode Function

The SRX-R220 and SRX-R210 allows squeezed images (16:9 or 1.896:1) to be changed to 2.39:1 un-squeezed images. This can be done electrically without an anamorphic lens and be activated by the SRX Controller software.

Keystone Masking

The SRX-R220 and SRX-R210 provide an image-masking function to compensate for image distortion that typically occurs when it has not been possible to install the projector perpendicular to the screen. These projectors provide keystone masking for both flat and curved screens.

Select 4 corner positions to mask the area outside the perimeter



For curved screens, select 2 positions at the apex of the curve, one at the top and one at the bottom of the screen.

Zoom/Focus Memory Function

The SRX-R220 and SRX-R210 are equipped with zoom and focus memory functions that make it easy to switch the projection between two types of aspect ratios.

When used with the optional motorised zoom lens LKRL-Z114C, LKRL-Z116C, LKRL-Z117, LKRL-Z119, or LKRL-Z122 , the zoom and focus positions for 1.85:1 motorised and 2.39:1 CinemaScope™ can be stored and instantly recalled via the SRX Controller software. This allows for full-screen display regardless of the aspect ratio. An electronic vertical alignment feature is included in the same memory to compensate for vertical changes in the image should the projector be mounted at a downwards angle.

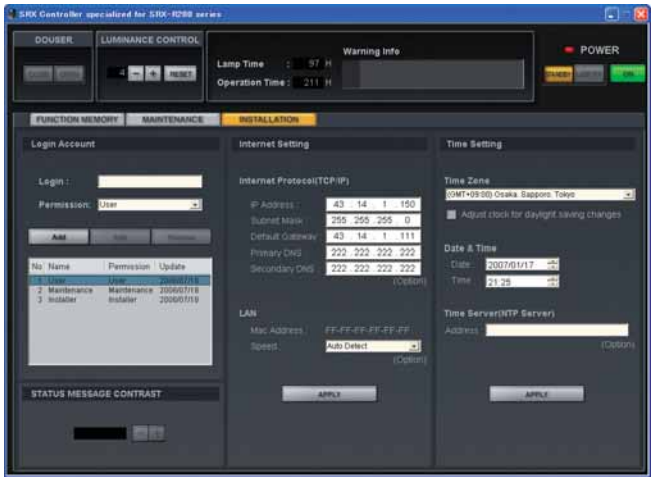
Ease of Setup and Maintenance

Easy Setup on a PC Using Supplied Software

The SRX-R220 and SRX-R210 are supplied with the SRX Controller software. This runs on a PC* connected to the projector via the RS-232C interface and features intuitive GUIs that enable easy setup and adjustment.

A comprehensive range of setup parameters including input configurations, colourimetry controls, installation adjustments and maintenance settings can be controlled via this software.

* System requirements for the setup software: Microsoft® Windows® XP Professional. PC not supplied.



Installation Setting

Colourimetry Setting

Easy Maintenance of Luminance Level

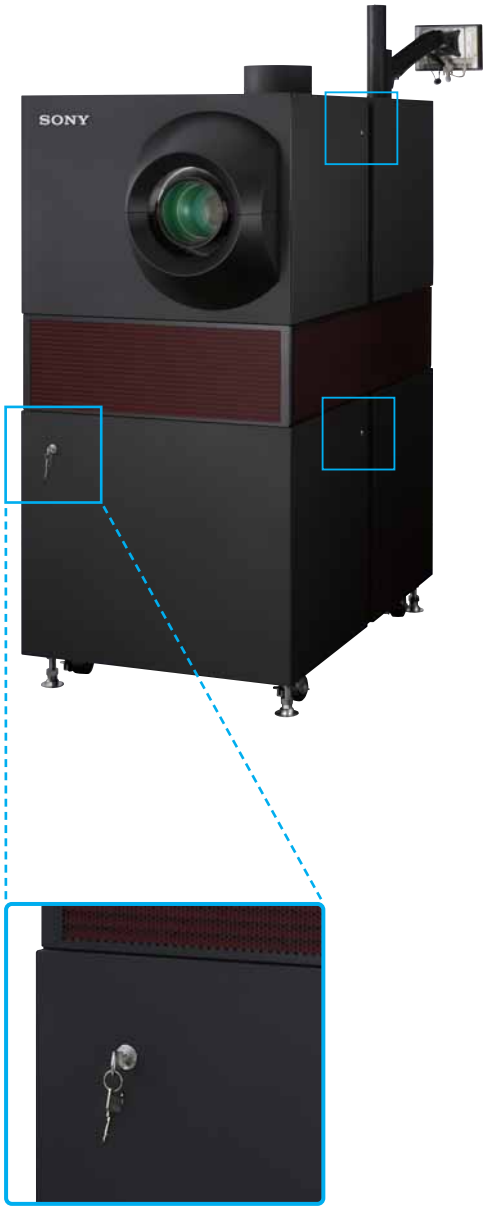
During long periods of usage, users commonly have to adjust the luminance level of their projector, as Xenon lamps typically age over time. The SRX-R220/SRX-R210 has a convenient function to help users know when to make such adjustments. The supplied SRX Controller software allows users to set a standard luminance level and displays an alert message on the LCD screen of the projector when the value changes from the standard level. With this feature, proper and timely maintenance of the luminance level can be performed.

Automatic Lamp Power Calibration Function

When switching the aspect ratio of projection from Cinemascope to VistaVision and vice versa, the luminance levels will change. To maintain a constant luminance level during these changes, the SRX-R220 and SRX-R210 projectors can automatically calibrate the luminance level by controlling the lamp output power. Users can set their desired luminance level using the SRX Controller software for this operation.

Key Lock System

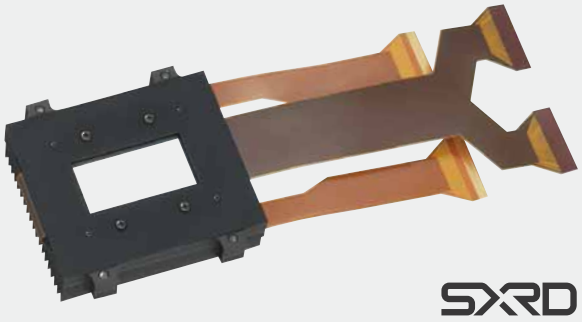
The SRX-R220 and SRX-R210 are designed to be highly secure in response to DCI requirements. They do not have screw holes and require physical keys to open their enclosures. The security enclosure meets the SPB-2 anti-tamper regulation stipulated by the DCI. Even if the enclosure is opened with the physical keys, an anti-tamper sensor will trigger the LMT-100 Media Block to immediately start recording logs for further safety. In this case, the projector also deletes Key Delivery Messages (KDM) automatically, so that DCP files cannot be played back.



Technological Features

Ultra High resolution 4K

Sony original SXRD display devices deliver the exceptionally high resolution of 4K (4096 H x 2160 V pixels which is more than four times as many pixels as full HDTV (1920 x 1080, 16:9 wide screen format). The SXRD device helps to achieve this high picture quality by incorporating nearly 8.85 million pixels per imager at a narrow pitch of 8.5 microns. These high-density pixels enable an outstandingly high resolution which are a quarter of the size of pixels projected using typical 2K and HD.



In addition to their ultra high resolution and high contrast performance, the SXRD devices used in the SRX Series projectors have the following remarkable technological features:

Vertically Aligned Liquid Crystal System

In every type of projector system, displaying absolute black is a major requirements in order to achieve a high contrast ratio.

In other words, the contrast ratio of a projector depends on how effectively the light from the source can be blocked so it does not leak through the imager.

All Liquid Crystal Display (LCD) devices control the amount of light being projected by applying an electric field to the liquid crystal layer. In typical LCD devices, black is produced when an electric field is applied across the liquid crystal cell layer. However, molecules near the surface of the glass substrate may not be accurately controlled due to the influence of the alignment film. This is not an issue for bright images. However, when displaying dark images, light may tend to leak from the LCD device, resulting in a creamy black instead of a deep black.

The SXRD device does not exhibit these characteristics. This is because it utilises a Vertically Aligned Liquid Crystal system which displays black when the electric field is not applied and because all molecules are in the correct alignment, the polarised light alignment is also optimised. The direct result is a far deeper black level, leading to a high contrast ratio.

Thin Liquid Crystal Cell Gap

Another important enabling factor of high contrast is the SXRD device's ultra-thin cell gap of less than 2 micrometres.

In conventional Vertically Aligned Liquid Crystal systems, a thin cell gap could not be achieved. Sony has overcome this difficulty through the use of Sony's innovative planarisation technology in the silicon backplane structure and an advanced Silicon wafer-based assembly process.

The SXRD device also adopts a structure that does not use "spacers". These are columns found in conventional reflective liquid crystal devices to maintain a constant gap between the liquid cell floor and the top of the device. Spacers tend to both scatter and reflect light, which can impair high-contrast pictures. In the spacer-less SXRD device, these artifacts are eleminated.

Short Response Time

The thin cell gap structure in SXRD devices also contributes to an ultra-fast response time of 5 milliseconds. The SXRD device reacts promptly to an instantaneous change of picture content, enabling it to display a smooth motion.
Consequently, the SRX-R220 and SRX-R210 virtually eliminate motion blur; a particularly significant benefit for visual content that includes fast-moving objects.

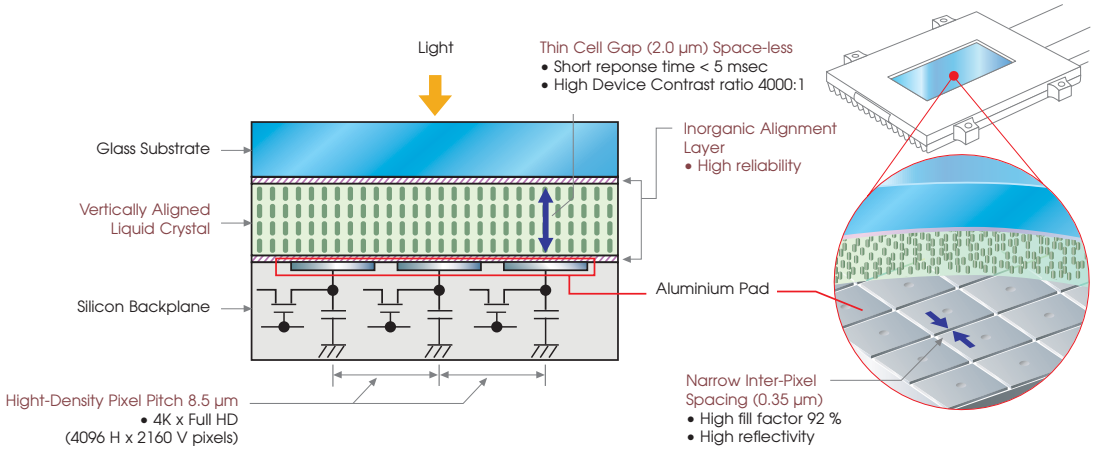
Reliable Imaging Device

The SRX-R220 and the SRX-R210 use a high-power, bright lamp. As a result, special attention has been paid to the reliability of the SXRD device. The inorganic materials utilised for the alignment layer of the SXRD device are resistant to deterioration or deformities that could occur due to the intense heat and light generated by the powerful lamp system.

Silicon X-tal Reflective Display (SXRD) imaging device

The SXRD device used by the SRX-R110CE and SRX-R105CE is a 1.55-inch* Liquid Crystal on Silicon-based imager developed using leading-edge manufacturing technology. High quality, accurate visuals are created using this brilliant imaging device.

* Measured diagonally.


Light
Thin Cell Gap (2.0 µm) Space-less
• Short reponse time < 5 msec
• High Device Contrast ratio 4000:1
Glass Substrate
Vertically Aligned Liquid Crystal
Silicon Backplane
Inorganic Alignment Layer
• High reliability
Aluminium Pad
Hight-Density Pixel Pitch 8.5 µm
• 4K x Full HD
(4096 H x 2160 V pixels)
Narrow Inter-Pixel Spacing (0.35 µm)
• High fill factor 92 %
• High reflectivity

Digital Cinema Server – LMT-100 Media Block

The LMT-100 Media Block is a digital cinema server that can handle DCI-compliant DCP files, which is a key component in establishing highly secure theatre systems. The LMT-100 server handles DCP (Digital Cinema Package) files that consist of picture, audio and subtitle data files that are wrapped into an MXF (Material eXchange Format) file. It plays back the DCP file using advanced processing to decrypt and decode the picture data and then send it to the projector over a secure multi-pin connection system.

The LMT-100 server is controlled with the Sony LSM-100 SMS (Screen Management System) software.

Decryption and Unwrapping of DCP Files

The LMT-100 can decrypt DCI-compliant DCP files that have been encrypted using the AES (Advanced Encryption Standard PSP 197) and unwrap individual picture, audio and subtitle data files for processing that are encoded within the MXF file.

Picture and Subtitle

The LMT-100 can decode the JPEG 2000 picture data in real time for playback, regardless of whether the file was encoded at 2K or 4K resolution. Subtitles in Timed-Text/XML or PNG/XML format can be overlaid onto picture data before it is sent to the projector.

Audio

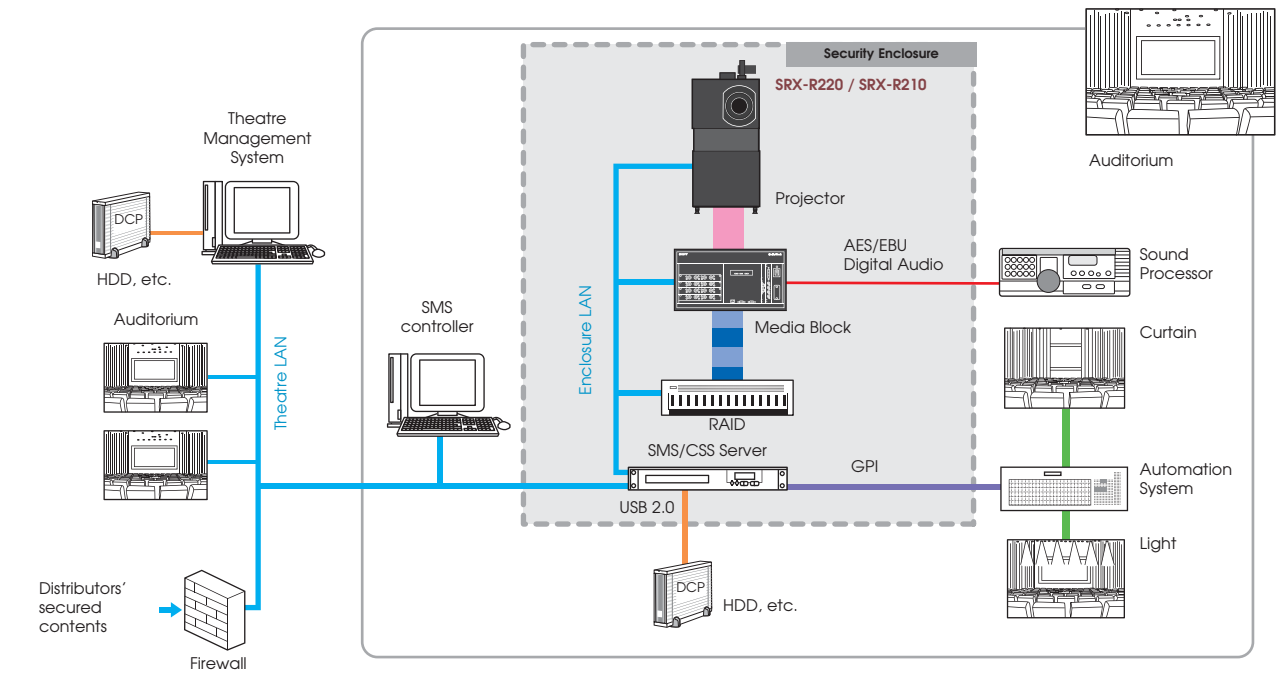
The LMT-100 transcodes audio DCP files into AES/EBU digital audio signals and outputs them to external audio processors. Up to 16 channels can be output from D-sub 25-pin or BNC connectors. The timing of the audio output can be adjusted for complete synchronisation with the picture and any channel can be routed to any output to simplify installation.

Event Log Creation

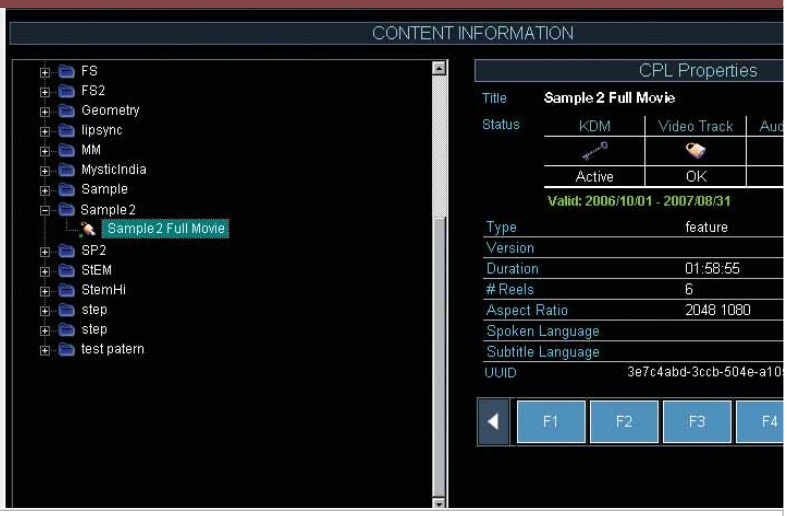
The LMT-100 can generate event logs* to record certain information – such as the number of times a movie has been played – which is a DCI requirement for secure content control.

* Requires the optional SMS software.

Sample system configuration



Screen Management System – LSM-100



The LSM-100 Screen Management System is a software application that controls components including: SMS (Screen Management System) servers, SMS controllers, projectionist terminals, CSS (Cavity Security system) servers, power equipment and status lights. For these controls, a variety of functions are provided. It also provides seamless integration with other systems in the theatre such as the Theatre Management System and the auditorium automation system. The LSM-100 satisfies the requirements of DCI Specifications version 1.0 for screen management and security.

Projectionists' Terminal

The SRX-R220 and SRX-R210 projection systems support projectionists control via a colour touch-screen mounted on the rear of the projector. The Projectionist Terminal gives uncluttered access to the essential operations required to run a show as well as monitoring the status of elements within the projection system.

Supported Functions

Screen Management Functions:

- Content ingest/registration and content management
- KDM registration and key management
- Show Play List (SPL) management
- Show schedule management
- Playback control
- Execution of SPLs
- Device configuration
- Device monitoring
- Auditorium setup
- Status monitoring: collect status information from projector, Media Block, RAID and Cavity Security System; report status at pre-configured intervals
- Log retrieval: including log filtering and secondary log distribution
- Automation system interface
- Interface (XML/HTTPS) to external TMS system

Security Functions:

- Monitoring of cavity security sensors
- Notifying Media Block LMT-100 and CSS of cavity sensor events
- Responding to security queries made by Media Block LMT-100
- Keeping diagnostic logs of security events

Power Management Functions:

- Status monitoring: monitor status of RAID during power-up sequence
- IP traffic monitoring: listen for IP messages from UPS signaling abnormal power and UPS battery conditions
- IO monitoring: monitor power state change requests via projectionist terminals
- Controls the enclosure power lamp to show current power status
- Sequence power provided to component devices during power-up and power-down transitions, both user-requested and unplanned utility outages
- Control UPS during unplanned utility outages
- Initiate standby/shutdown sequences for SRX projector, Media Terminal, SMS Server, UPS
- Initiate startup/power-on sequences for UPS, RAID, Media Terminal, SMS Server
- Provides GUIs with status indication

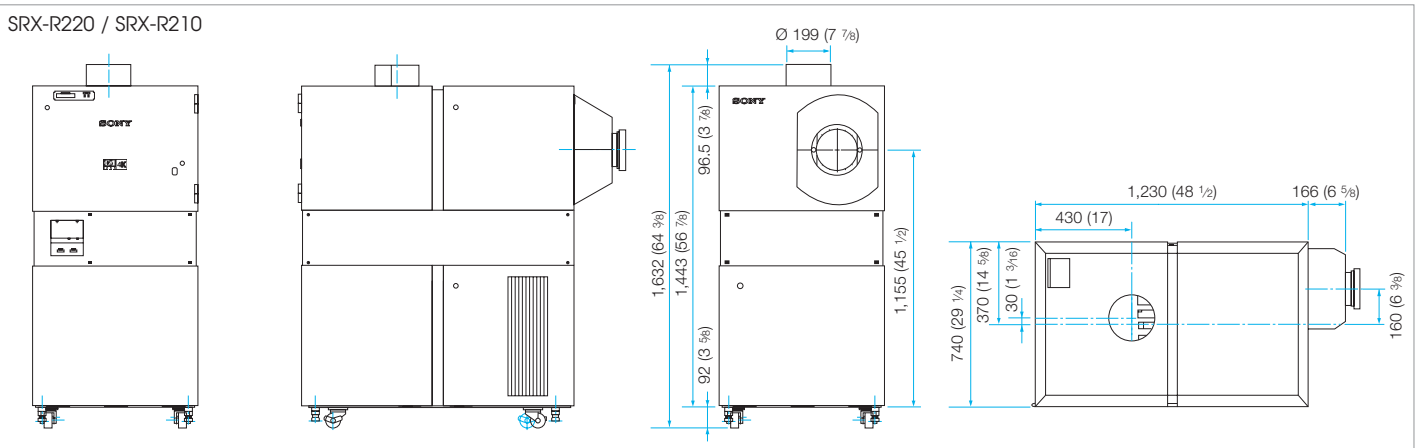
Enclosure Status Light Management Functions:

- Monitors and aggregates status of all system components using SMS API
- Sends aggregated status information to the status light of the enclosure

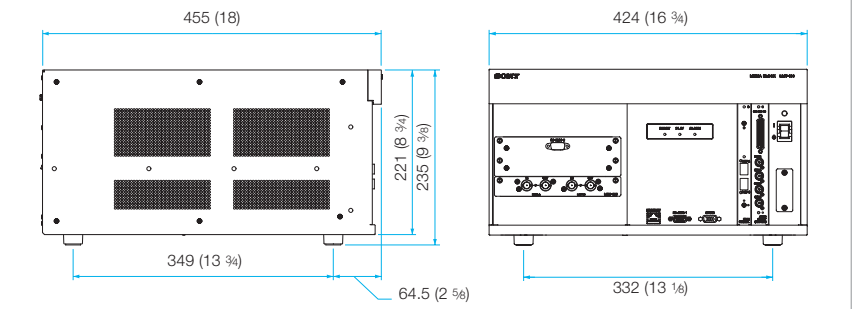
Dimensions

Unit = mm (inches)

SRX-R220 / SRX-R210



LMT-100



Optional Accessories

LKRL-Z114C
x1.35 to x1.98 zoom lens

LKRL-Z116C
x1.50 to x2.29 zoom lens

LKRL-Z117
x1.73 to x2.41 zoom lens

LKRL-Z119
x1.81 to x2.94 zoom lens

LKRL-Z122
x2.23 to x3.92 zoom lens

LKRX-2042A
4.2 kW Xenon lamp bulb for replacement (for SRX-R220)

LKRX-2030A
3.0 kW* Xenon lamp bulb for replacement (for SRX-R210)

LKRX-2020A
2.0 kW* Xenon lamp bulb for replacement (for SRX-R210)

*Tentative

Specifications (SRX-R220 / SRX-R210)

SXRD Device Main Specifications

Display device
SXRD (Silicon X-tal Reflective Display)
Size
1.55-inch across Diagonal
Resolution
4096 (H) X 2160 (V) Pixels
Reflectivity
77%
Contrast
More than 4000:1
Pixel pitch
8.5 µm
Width (between pixels)
0.35 µm
Response speed
5 msec (tr + tf)
Liquid crystal mode
Vertical Aligned Mode
Alignment layer
Inorganic Thin Film
Backplane process
0.35 µm MOS Process
Liquid crystal cell gap
Less than 2 µm

Optical

Projection system
3-SXRD panel, prism colour integrated system
Imaging device
SXRD, 1.55-inch (diagonal),
4096 (H) x 2160 (V) pixels on each chip
Lamp
SRX-R220: 4.2 kW Xenon lamp x 1
SRX-R210: 3.0 kW*2 Xenon lamp x 1 or
2.0 kW*2 Xenon lamp x 1
Screen coverage (Approx.)
SRX-R220: 4.5-metre to 20-metre screen width on Scope size (4.2 kW lamp)
SRX-R210: 4.5-metre to 17-metre screen width on Scope size (3.0 kW lamp)*2
4.5-metre to 14-metre screen width on Scope size (2.0 kW lamp)*2
Light output
SRX-R220: 14ft-L on 20-metre wide screen (4.2 kW lamp)*1
SRX-R210: 14ft-L on 17-metre wide screen (3.0 kW lamp)*1 *2
14ft-L on 14-metre wide screen (2.0 kW lamp)*1 *2

General

Colorimetry
Xenon Colour Primaries
R (X) 0.6800 ; (Y) 0.3200
G (X) 0.2650 ; (Y) 0.6900
B (X) 0.1500 ; (Y) 0.0600
White reference
Xenon white reference
(X) 0.3140 ; (Y) 0.3510
Contrast
Over 2000:1
Input signal
Media Block input x 2: 4096 x 2160 pixels
HD-SDI/Dual-link HD-SDI: 1920 x 1080 pixels (SMPTE-372M/SMPTE-292M/ITU-R.BT709/BTA-S004)
DC-SDI/Dual-link DC-SDI: 2048 x 1080 pixels 12 bit/X'Y'Z' (with Dual-link HD/DC-SDI Input Board)
DVI-D: XGA (1024x768) / SXGA1 (1280x960) / SXGA2 (1280x1024) / SXGA+ (1400x1050) / UXGA (1600x1200) / WUXGA (1920x1200) / HD (1920x1080) / DC (2048x1080)
Power consumption
SRX-R220: 1.2 kW (Single-phase/100-240VAC for main circuit) / 5.2kW (3-phase/200-208VAC or 380-415VAC selectable for lamp)
SRX-R210: 1.2kW (Single-phase/100-240VAC for main circuit) / 3.4kW*2 (3-phase/200-208VAC or 380-415VAC selectable for lamp)
Power requirements
AC 100 to 240 V, 50/60 Hz, single-phase (for Main power)
AC 200 to 208 V / AC 380 to 415 V, 3-phase(changeable) , 50/60 Hz (for Lamp power)
Operating temperature
+5°C to +35°C (+41°F to +95°F)
Storage temperature
-20°C to +60°C (+12°F to +140°F)
Operating humidity
35% to 85% (without condensation)
Storage humidity
10% to 90%
Dimensions
740 x 1535 x 1395mm (W x H x D)
(29 1/4 x 60 1/2 x 55 inches)
Mass
300 kg (661 lb 6 oz), without lens and lamp
Fan noise 65 dB or less

Input/Output

Input A
DVI-D
Input B
Dual-link HD/DC-SDI
Input C
A channel For Media Block INPUT-A (SRLV connection)
B channel For Media Block INPUT-B (SRLV connection)
Remote interface
D-sub 15-pin, RS-232C (female) x 1
Ethernet terminal, 10Base-T/100Base-TX x 1
Interlock
D-sub 15-pin (female) x 1

Others

Safety regulations
(UL60950 listed), (cUL60950), (FCC Class A), (IC Class A), (VCCI Class A), (EN60950), (CE Class A), (C-tick), (GB4943), (GB9254), (K60950), (CISPR22), (CISPR24)
Supplied accessories
Attachment base plate kit for Touch Panel Controller x 1
Operation instructions x 1
Status Light x 1
Touch Panel Controller Attachment kit x 1
Required specifications
OS: Microsoft Windows XP Professional Edition for control PC (English and Japanese) with Service Pack 2
Required Memory: 256 MB or more
HDD Capacity: 8 MB or more
Equipped with: 10Base/100Base-TX Ethernet Connector
RS-232C Connector
Display with XGA or larger
CPU: Windows XP: Intel® Celeron®
1 GHz or faster (recommendation)

*1 Measured at the screen center of a full pixel size (4096 x 2160) projection with 100 IRE white and a screen gain of 1.8. A ft-L (foot-lambert) is a unit of measurement for luminance. One foot-lambert equals 3.4262591 candelas per square meter.

*2 Tentative

Specifications (Media Block LMT-100)

General

Power consumption
2.1 to 1.1 A
Power requirements
AC 100 to 240 V, 50/60 Hz
Operating temperature
+5°C to +35°C (+41°F to +90°F)
Storage temperature
-20°C to +60°C (-4°F to +140°F)
Operating humidity
35% to 85% (without condensation)
Storage humidity
10% to 90%
Dimensions (W x H x D)
424 x 221 x 455 mm
(16 3/4 x 8 3/4 x 18 inches)
Mass
17.5 kg (38 lb 9 oz)

Picture

Compression format (decode)
JPEG2000
Bit rate (J2K)
250 Mbps (Average), 500 Mbps (Max)
Resolution
4096(H) x 2160(V) pixels, 2048(H) x1080(V) pixels
Applicable input signal source (External signal input)
Video: HD-SDI, DC-SDI

Audio

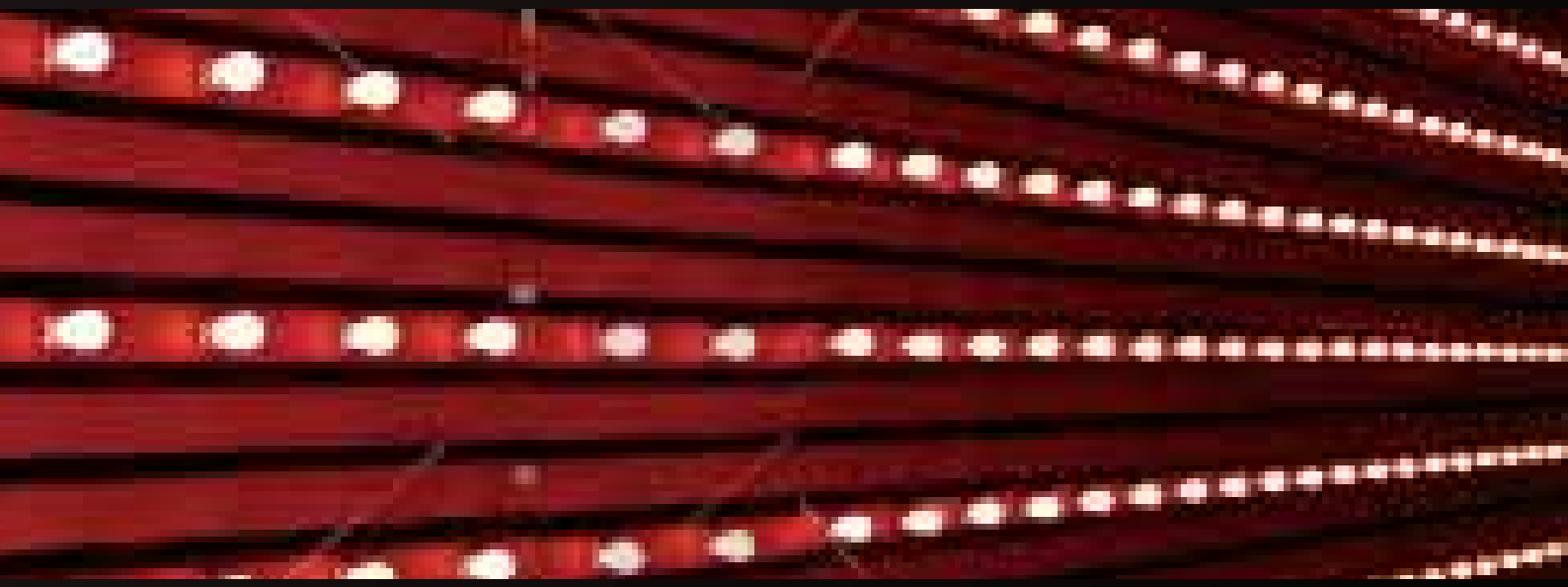
Channel
16 channels
24 bits Linear PCM
Digital audio format
Timed-Text/XML or PNG/XML

Subtitle

Format
Timed-Text/XML or PNG/XML

Security

Decryption format
RSA 2048 bit, AES
Key import
TLS Session from SMS server



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